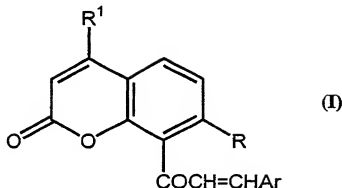


# CLAIMS

1. A compound of Formula (I):



or a pharmaceutically acceptable salt or solvate thereof wherein:

Ar represents:

a substituted or unsubstituted, (preferably aromatic), carbocyclic or heterocyclic group, said carbocyclic or heterocyclic group containing from 5 to 10 ring atoms, said ring atoms forming one or two rings, wherein the or each ring contains 5 or 6 ring atoms, any heteroatoms being selected from N, O and S, any substituents on the Ar group being independently selected from the group consisting of:

(a) Cl, (b) Br, (c) F, (d) OH, (e) NO<sub>2</sub>, (f) CF<sub>3</sub>, (g) C<sub>1-4</sub> lower alkyl (in particular CH<sub>3</sub>), (h) SCH<sub>3</sub>, (i) NHCOCH<sub>3</sub>, (j) N(R<sup>6</sup>)(R<sup>8</sup>) wherein R<sup>6</sup> and R<sup>8</sup> are the same or different and each represents H or lower C<sub>1-4</sub> alkyl, (k) OR<sup>10</sup> wherein R<sup>10</sup> represents a saturated or unsaturated lower C<sub>1-4</sub> straight or branched hydrocarbonyl group which may be unsubstituted or substituted by 1, 2 or 3 substituents selected from:

Cl, Br, F, OMe, NO<sub>2</sub> and CF<sub>3</sub>,

and (l) -OCOR<sup>11</sup>, wherein R<sup>11</sup> represents a saturated or unsaturated lower C<sub>1-6</sub> straight or branched hydrocarbonyl group or a phenyl group;

R represents

OH, OR<sup>10</sup> or OCOR<sup>11</sup>, wherein R<sup>10</sup> and R<sup>11</sup> are as defined above; and

R<sup>1</sup> represents H or a lower C<sub>1-6</sub> straight or branched hydrocarbonyl group which may be

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unsubstituted or substituted by 1, 2 or 3 substituents selected from Cl, Br, F, OMe, NO<sub>2</sub> and CF<sub>3</sub>.

2. A compound according to Claim 1 wherein Ar represents a substituted or unsubstituted (preferably aromatic), heterocyclic group said heterocyclic group containing from 5 to 10 ring atoms, said ring atoms forming one or two rings, wherein the or each ring contains 5 or 6 ring atoms, the heteroatoms being selected from N, O and S, and any substituents on the Ar group being independently selected from the group consisting of:

(a) Cl, (b) Br, (c) F, (d) OH, (e) NO<sub>2</sub>, (f) CF<sub>3</sub>, (g) C<sub>1-4</sub> lower alkyl (in particular CH<sub>3</sub>), (h) SCH<sub>3</sub>, (i) NHCOCH<sub>3</sub>, (j) N(R<sup>8</sup>)(R<sup>8</sup>) wherein R<sup>8</sup> and R<sup>8</sup> are the same or different and each represents H or lower C<sub>1-4</sub> alkyl, (k) OR<sup>10</sup> wherein R<sup>10</sup> represents a saturated or unsaturated lower C<sub>1-6</sub> straight or branched hydrocarbyl group which may be unsubstituted or substituted by 1, 2 or 3 substituents selected from:

Cl, Br, F, OMe, NO<sub>2</sub> and CF<sub>3</sub>,

and (l) -OCOR<sup>11</sup>, wherein R<sup>11</sup> represents a saturated or unsaturated lower C<sub>1-6</sub> straight or branched hydrocarbyl group or a phenyl group.

3. A compound according to any preceding claim wherein the Ar group is a substituted or unsubstituted (preferably aromatic), heterocyclic group, said heterocyclic group containing from 5 to 10 ring atoms, wherein at least one of the ring atoms is a nitrogen atom and any substituent on the ring is as defined as for Claim 1.

4. A compound according to any preceding claim wherein Ar represents pyridyl or indolyl.

5. A compound according to Claim 1 wherein Ar represents a substituted or unsubstituted (preferably aromatic), carbocyclic group, said carbocyclic group containing from 5 to 10 ring atoms, said ring atoms forming one or two rings, wherein

the or each ring contains 5 or 6 ring atoms, and any substituents on the Ar group being independently selected from the group consisting of:

(a) Cl, (b) Br, (c) F, (d) OH, (e) NO<sub>2</sub>, (f) CF<sub>3</sub>, (g) C<sub>1-4</sub> lower alkyl (in particular CH<sub>3</sub>), (h) SCH<sub>3</sub>, (i) NHCOCH<sub>3</sub>, (j) N(R<sup>6</sup>)(R<sup>8</sup>) wherein R<sup>6</sup> and R<sup>8</sup> are the same or different and each represents H or lower C<sub>1-4</sub> alkyl, (k) OR<sup>10</sup> wherein R<sup>10</sup> represents a saturated or unsaturated lower C<sub>1-6</sub> straight or branched hydrocarbyl group which may be unsubstituted or substituted by 1, 2 or 3 substituents selected from:

Cl, Br, F, OMe, NO<sub>2</sub> and CF<sub>3</sub>,

and (l) -OCOR<sup>11</sup>, wherein R<sup>11</sup> represents a saturated or unsaturated lower C<sub>1-6</sub> straight or branched hydrocarbyl group or a phenyl group.

6. A compound according to any preceding claim wherein any substituents on the Ar group are selected from the group consisting of: NHCOCH<sub>3</sub>, N(R<sup>6</sup>)(R<sup>8</sup>), OR<sup>10</sup> and -OCOR<sup>11</sup>, wherein R<sup>6</sup>, R<sup>8</sup>, R<sup>10</sup> and R<sup>11</sup> are as defined in Claim 1.

7. A compound according to any preceding claim wherein Ar is substituted with one or more OR<sup>10</sup> groups, wherein R<sup>10</sup> represents a saturated or unsaturated lower C<sub>1-6</sub> straight or branched hydrocarbyl group.

8. A compound according to Claim 7 wherein R<sup>10</sup> represents methyl.

9. A compound according to any of Claims 5 to 8 wherein Ar is selected from phenyl or phenyl substituted with 1, 2 or 3 methoxy groups.

10. A compound according to any preceding claim wherein R represents an unsaturated lower C<sub>1-6</sub> straight or branched hydrocarbyl group.

11. A compound according to Claim 10 wherein R represents OCH=C(CH<sub>3</sub>)<sub>2</sub>, OCH<sub>2</sub>CMe=CH<sub>2</sub>, OCH<sub>2</sub>CH=CH<sub>2</sub> or OCH<sub>2</sub>C≡CH.

12. A compound according to Claim 1 wherein Ar is selected from phenyl, trimethoxyphenyl, 3-pyridyl, 4-pyridyl or 3-indolyl; and R is selected from  $\text{OCH}=\text{C}(\text{CH}_3)_2$ ,  $\text{OCH}_2\text{CMe}=\text{CH}_2$ ,  $\text{OCH}_2\text{CH}=\text{CH}_2$  or  $\text{OCH}_2\text{C}\equiv\text{CH}$ .

13. A compound according to any preceding claim wherein  $\text{R}^1$  represents a lower  $\text{C}_{1-6}$  straight or branched hydrocarbyl group.

14. A compound according to Claim 13 wherein  $\text{R}^1$  represents methyl.

15. A compound according to Claim 5 wherein:

Ar represents

phenyl, which may be unsubstituted or substituted by one, two or three substituents independently selected from

Cl, Br, F, OMe,  $\text{NO}_2$ ,  $\text{CF}_3$ ,  $\text{C}_{1-4}$  lower alkyl (in particular  $\text{CH}_3$ ),  $\text{NMe}_2$ ,  $\text{NEt}_2$ ,

$\text{SCH}_3$  and  $\text{NHCOCH}_3$ ;

thienyl, 2-furyl, 3-pyridyl, 4-pyridyl or indolyl.

R represents

$\text{OH}$  or  $\text{OCH}_2\text{R}^1$ , wherein  $\text{R}^1$  is selected from  $-\text{CH}=\text{CMe}_2$ ,  $-\text{CMe}=\text{CH}_2$ ,  $-\text{CH}=\text{CH}_2$  and  $-\text{C}\equiv\text{CH}$ .

16. A compound according to any preceding claim wherein  $\text{R}^6$  and  $\text{R}^8$  are the same or different and each represents H or lower  $\text{C}_{1-4}$  alkyl.

17. A compound according to any preceding claim wherein  $\text{R}^{10}$  and  $\text{R}^{11}$  represents a saturated or unsaturated  $\text{C}_{1-6}$  straight chain or branched hydrocarbyl group.

18. A compound according to any Claim 17 wherein  $\text{R}^{10}$  and  $\text{R}^{11}$  are selected from methyl, ethyl, n-propyl or isopropyl.

19. A compound of Formula (I) selected from the following:

1-[4-methyl-7-(3-methylbut-2-enyloxy)coumarin-8-yl]-3-(pyridine-3-yl)propen-1-one  
(VIB 106),

1-[4-methyl-7-(3-methylbut-2-enyloxy)coumarin-8-yl]-3-phenylpropen-1-one  
(VIB 119),

1-[4-methyl-7-(3-methylbut-2-enyloxy)coumarin-8-yl]-3-(3,4,5-trimethoxyphenyl)-  
propen-1-one (VIB 120),

1-[4-methyl-7-(2-methylallyloxy)coumarin-8-yl]-3-(pyridine-3-yl)propen-1-one  
(VIB 122),

1-[4-methyl-7-(2-methylallyloxy)coumarin-8-yl]-3-phenylpropen-1-one (VIB 121),

1-[4-methyl-7-(2-methylallyloxy)coumarin-8-yl]-3-(3-methoxyphenyl)propen-1-one  
(VIB 162),

1-[4-methyl-7-(2-methylallyloxy)coumarin-8-yl]-3-(3,4,5-trimethoxyphenyl)propen-1-  
one (VIB 123),

1-[4-methyl-7-(allyloxy)coumarin-8-yl]-3-phenylpropen-1-one (VIB 158),

1-[4-methyl-7-(allyloxy)coumarin-8-yl]-3-(pyridin-3-yl)propen-1-one (VIB 161),

1-[4-methyl-7-(allyloxy)coumarin-8-yl]-3-(3-methoxyphenyl)propen-1-one (VIB 159),

1-[4-methyl-7-(allyloxy)coumarin-3-yl]-3-(3,4,5-trimethoxyphenyl)propen-1-one  
(VIB 160),

1-[4-methyl-7-(prop-2-ynyloxy)coumarin-8-yl]-3-(3,4,5-trimethoxyphenyl)propen-1-  
one (VIB 126),

1-[4-methyl-7-(prop-2-ynyloxy)coumarin-8-yl]-3-phenylpropen-1-one (VIB 124),

1-[4-methyl-7-(prop-2-ynyloxy)coumarin-8-yl]-3-(pyridin-3-yl)propen-1-one (VIB 125),  
and

1-[4-methyl-7-(prop-2-ynyloxy)coumarin-8-yl]-3-(3-methoxyphenyl)propen-1-one  
(VIB 163).

20. A compound of Formula (I) as defined in any preceding claim for use as a  
antiproliferative medicament.

21. Use of a compound of Formula (I) as defined in any preceding claim for the manufacture of a medicament for the treatment or prevention of neoplasms.

22. Use according to Claim 21 wherein the neoplasms are located in the uterus, ovary or breast.

23. Use according to Claim 21 or 22 of a compound of Formula (I) for the manufacture of a medicament for the treatment of paclitaxel- and docetaxel-resistant cancer cells.

24. Use according to any of Claims 21 to 23 of a compound of Formula (I) in the manufacture of an antiproliferative medicament for combination therapy.

25. Use according to Claim 24 of a compound of Formula (I) in the manufacture of an antiproliferative medicament in combination with one or more antineoplastic agents.

26. The use according to Claim 25 wherein the antineoplastic agent comprises paclitaxel or docetaxel.

27. The use according to Claim 19 in the manufacture of a medicament for the treatment or prevention of menopausal disorders and osteoporosis.

28. A pharmaceutical composition comprising one or more of the compounds of Formula (I) as defined in any preceding claim, in combination with one or more pharmaceutically acceptable excipients.

29. A pharmaceutical composition according to Claim 28 further comprising one or more antineoplastic agents.

30. A pharmaceutical composition according to Claim 29 wherein the antineoplastic agent is selected from paclitaxel or docetaxel.

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